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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/541,199	07/05/2005	Yukihiro Hirai	821.151	7636
7590 Berenato White & Stavish Suite 240 6550 Rock Spring Drive Bethesda, MD 20817		07/02/2007	EXAMINER HARVEY, JAMES R	
			ART UNIT 2833	PAPER NUMBER
			MAIL DATE 07/02/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/541,199

**Applicant(s)**

HIRAI, YUKIHIRO

**Examiner**

James R. Harvey

**Art Unit**

2833

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 July 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>3-17-06</u> | 6) <input type="checkbox"/> Other: ____  |

### ***DETAILED ACTION***

#### ***Drawings***

- Figure(s) 7a, 7b, 7c and 8 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
- The drawings are objected to because the cross-hatching is improper. See MPEP 608.02.

For example, portions of the drawings in section and made of an insulated material must be crosshatched with alternating thick and thin lines, not with just thin lines.

- The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims.

In reference to Claim(s) 1, it is not clear how cable 7 is different from a fpc.

In reference to Claim(s) 2 and 3, the recitation concerning that applicant's terminals 6 of the printed circuit board 5 have an arch cross section is vague and indefinite. The claims and drawings are only seen to support that the micro contacting pieces 8 of the FPC 7 have an arch in cross section.

#### ***Claim Objections***

- The following claim(s) is/are objected to because of the noted informalities:
- Claim(s) 2 and 3 is/are objected to under 37 C.F.R. Rule 1.75 (d)(1). The terms and the phrases used in the claims must find clear support or antecedent basis in the description so that the meaning of the terms in the claims may be ascertainable by reference to the description. In

particular, In reference to Claim(s) 2 and 3, the recitation concerning that applicant's terminals 6 of the printed circuit board 5 have an arch cross section is vague and indefinite. The claims and drawings are only seen to support that the micro contacting pieces 8 of the FPC 7 have an arch in cross section. Correction is required.

***Claim Rejections - 35 USC § 112***

- The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

- The following claims is/are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In reference to Claim(s) 1, the recitation "cable" is vague and indefinite. The drawings and specification do not differentiate the cable 7 from a fpc. A examination on the merits (as best understood) is addressed herein.

In reference to Claim(s) 2 and 3, the recitation concerning that applicant's terminals 6 of the printed circuit board 5 have an arch cross section is vague and indefinite. The claims and drawings are only seen to support that the micro contacting pieces 8 of the FPC 7 have an arch in cross section. A examination on the merits (as best understood) is addressed herein. Appropriate correction of the above is required.

***Claim Rejections - 35 USC § 102***

- The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

### ***Claim Rejections - 35 USC § 103***

- The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

### ***Claim Examination***

**\*\* The following claim(s) is/are rejected under 35 U.S.C. 102(b) as being anticipated by Roberts (6074220; herein referred to as rr ).**

In reference to Claim(s) 1, rr shows a lever 30 ( figure 9a), a board 6 (cover sheet), terminals 5 ( column 4, line 45 ), a fpc 4, pieces 2 and the insulator 7 guides the fpc 4.

The meaning of “cable” is not set forth in the claims by any structure and is thus deemed to be so broad that it is met by the applied reference.

In reference to Claim(s) 2, rr shows how the pieces 2 contact the terminals 5 (cover sheet).

In reference to Claim(s) 3, rr shows the pieces have an arch cross sectional shape ( figure 8b ).

In reference to Claim(s) 4, rr shows the cross sectional shape is at the surface the terminals contact the pieces.

**\*\* The following claim(s) is/are rejected under 35 U.S.C. 103(a) as being unpatentable over rr.**

In reference to Claim(s) 5, rr shows substantially the invention as claimed.

However, rr is not explicit as to the details of method including a first process for UV lithograph using thick photo resin and a second step for micro plating process.

The three process (UV lithograph, photo resin and plating) are known in the art.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the three known processes to manufacture the arrangement of rr.

One skilled in the art would have been motivated to use the three known processes in order to make the invention of rr easier to manufacture.

One skilled in the art would have been motivated to use the plating in order to provide an electrical connection with less resistance or reduce the probability that corrosion could damage the electrical contact.

### ***Conclusion***

- The prior art listed on PTO form 892 that is made of record and not relied upon is considered pertinent to applicant's disclosure because it shows the state of the art with respect to applicant's claimed invention.

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- Any inquiry concerning this communication or earlier communications from the examiner should be directed to James R. Harvey whose telephone number is 571-272-2007. The examiner can normally be reached from 8:00 A.M. to 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on 571-272-2800 extension 33.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2800.

- Applicant is encouraged to send correspondence through the USPTO fax number 571-273-8300.
- Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jrh  
June 18, 2007

/James Harvey/  
James Harvey  
Primary Examiner